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ABSTRACT

This paper presents a list of key items in the field of elementary and secondary education, statistics for which are frequently requested. Each item is followed by the date of the latest published or available National Center for Education Statistics (NCES) statistics. With the exception of Census data, all of these data should be collected by the NCES at the State level and later aggregated to provide national totals. Basic items should be collected annually and published in a report similar to "Fall Statistics of Public Elementary and Secondary Day Schools." A definitive report, using "Statistics of State Schools Systems" as a model, should be prepared biennially, providing a detailed statistical account of public education. Other survey items of secondary and tertiary importance are: (1) information for a directory of public school systems; (2) trends in public school finance; (3) private elementary and secondary schools; (4) offerings and enrollments in high school subjects; (5) surveys of preprimary enrollment; (6) special education for the handicapped and the gifted; (7) organizational structure of public and private elementary and secondary schools; (8) educational background and characteristics of teachers; (9) dropout characteristics; and (10) the quality of education. State departments of education can be used as the major source of statistics on these items. (JAZ)

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An Elementary and Secondary School Statistics Program for the National Center for Education Statistics

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My goal in preparing this paper is to speak for the users of education statistics, those individuals and organizations that call, write, and visit the National Center for Education Statistics (NCES) in their search for meaningful data on elementary and secondary education in the United States. I know the kinds of questions they ask, and I think I know the kinds of statistical information that will be most useful to them.

My qualifications for speaking for the users are as follows: I arrived at the Center (it was known as the Research and Statistical Services Branch of the Office of Education in those days) in December 1955. For some months I worked on the surveys of City School Systems and State School Systems. Upon the completion of these surveys in the late summer of 1956, my work assignment was changed to include the statistical information function, and I have been closely identified with the Center's dissemination program for the past 29 years. During this time I estimate that I have talked with approximately 3,000 users a year, or a total of about 87,000 users during the 29-year period.

I have developed a list of key items in the field of elementary and secondary education that should be collected on a recurring basis. Except for those items designated as Census data, the items should be collected by the Center at the State level. The State figures should then be aggregated to provide national totals. Both State and national totals should be published in regularly recurring publications of the Center. Great care should be exercised to see that the figures are comparable from State to State and consistent from one year to the next. Consistent series of data enable us to measure trends over time, and this is of vital importance in our work. The list of key items follows.

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List of Basic Statistics Frequently Requested from
the Statistical Information Office
(The date of the latest published and/or readily available
NCES statistics follows each item)

Public Elementary and Secondary Schools

- Pupils
  - Enrollment by grade* (Fall 1983)
  - Enrollment by level (elementary vs. secondary)* (Fall 1978)
  - Enrollment by age, race, and sex (Census data)
  - Enrollments in high school subjects* (1981-82)
  - Average daily attendance and average daily membership* (1980-81)
  - Average length of school year and days attended per pupil enrolled (1980-81)
  - Pupils transported at public expense (1980-81)
- Employees
  - Classroom teachers by level* (1980-81)
  - Classroom teachers by sex* (1980-81)
  - Classroom teachers by teaching field (1979-80)
  - Other professional staff by type of position and by sex* (by type of position only, Fall 1981)
  - Nonprofessional staff (Fall 1981)
- Schools
  - By level* (1982-83)
  - By grade span (1982-83)
- School districts
  - By size of enrollment* (Fall 1981)
  - Operating vs. nonoperating (Fall 1982)
- High school graduates
  - By sex* (1980-81)
  - By type of program (Spring 1980 senior class)
- Revenue receipts
  - From Federal Government* (1982-83)
  - From State governments* (1982-83)
  - From local governments* (1982-83, including other sources)
  - From other sources (gifts and tuition and transportation fees) (1967-68)
- Nonrevenue receipts (1980-81)
- Expenditures
  - Current expenditures for regular school program* (1982-83)
    - Instruction* (1980-81)
      - Salaries of classroom teachers* (1981-82 estimates)
      - Salaries of other instructional staff* (1975-76 data for total instructional staff)
      - Salaries of nonprofessional staff (1975-76)
      - Free textbooks (1975-76)
      - School library books (1975-76)

Supplies and other instructional expenses (1975-76)
Administration* (1980-81)
Operation and maintenance of plant* (1980-81)
Fixed charges* (1980-81)
Other school services* (1980-81)
Transportation of public school pupils (1980-81)
Health and attendance services (1980-81)
Food and other services (1980-81)
Other current expenditures (summer schools, community services)* (1980-81)
Capital outlay* (1980-81)
Interest on school debt* (1980-81)

Private elementary and secondary schools

Pupils
Enrollment by grade (Fall 1978)
Enrollment by level* (1970-71)
Enrollment by age, race, and sex (Census data)

Employees
Classroom teachers by level* (1970-71)
Other professional staff (Requested in Fall 1978; not readily available)
Nonprofessional staff (Requested in Fall 1978; not readily available)

Schools by level* (1980-81)

High school graduates by sex* (1964-65)

*While all the items on this list are judged to be important, those marked with an asterisk are considered critical items if we are to continue to provide adequate service to the public.

All of the above statistics should be collected at least biennially, and some of the really basic items, including public school enrollment, attendance, teachers, graduates, revenues, and expenditures, should be collected on an annual basis. The annual figures should be published in the kind of report we used to call Fall Statistics of Public Elementary and Secondary Day Schools. In preparing this report, we should emphasize speed rather than precision, so that the data can be published before the end of the school year to which they relate. This means that the financial data in the fall report will necessarily be estimates rather than final, audited figures. When the fall survey is repeated, the respondents should be encouraged to report any changes that have occurred in the data they submitted for the previous year, and those corrections should be printed in at least one subsequent edition of the publication. As our model for this kind of reporting, we might very well look to the Estimates of School Statistics, published annually by the National Education Association.

In addition to the annual Fall Statistics report, the Center should also publish a definitive, comprehensive report on public elementary and secondary education. This report, which should be prepared biennially, will provide a detailed statistical account of public education in each State and in the Nation as a whole. It will contain all of the items on public schools listed above, and it may very well include additional information as well. It will provide an analysis of trends over time and will also devote considerable attention to interrelationships among the data items; e.g., enrollment will be compared with the number of teachers, and expenditures will be related to the number of pupils in average daily attendance. Our model for this report should be our own Statistics of State School Systems, which the Center published for many years but discontinued after 1975-76. A senior educational statistician with a thorough background in public school finance should be assigned the responsibility for this major study.

I consider the Fall Statistics and State School Systems to be the cornerstones of our elementary and secondary statistics program, and they deserve the highest priority when we are planning and conducting our surveys. I now turn to surveys of secondary or tertiary importance.

At intervals of two or three years, we should publish a directory of local public school systems. The directory, in addition to giving names and addresses, should provide a small amount of statistical information about each system. The following items should be adequate: enrollment, teachers, high school graduates, schools, and current expenditure per pupil. I believe that a directory could be designed that would provide all of this information in a publication about the same size as the one we published in the fall of 1980. The 1980 publication contained much less information, however. The directory should also contain a number of analytical tables that show the number of systems by State, by grade span, and by size of enrollment.

Every other year, for those years when we do not prepare a comprehensive State School Systems report, we should publish an abbreviated report on Revenues and Expenditures for Public Elementary and Secondary Education. Trends in public school finance are important, are in a state of flux, and should be measured annually. The publication should provide State and national totals on revenues by source and on expenditures by purpose but not necessarily in as much detail as the data in State School Systems.

We should conduct a survey of private elementary and secondary schools biennially. Private schools have increased in number and in enrollment, and they certainly deserve to be represented in our statistical program. The great need here is for a consistent series of State and national figures on schools, enrollment, teachers, and high school graduates. The data should be collected by affiliation of school, and the data on schools, enrollment, and teachers should be by level; i.e., there should be separate figures for elementary and for secondary schools. Nursery school children probably should not be counted in our data on elementary school enrollment. Most of these children are probably not involved in a truly "educational" program, and their inclusion in our statistics makes comparisons between public and private school enrollment almost meaningless. It was much more meaningful when we could compare public and private enrollment by grade groups (kindergarten through grade 8 and grades 9 through 12) or by level (elementary, excluding prekindergarten, and secondary).

One of our major studies that has been conducted rather infrequently is the survey of offerings and enrollments in high school subjects. While there are substantial difficulties inherent in a survey of this kind, the fact remains that these data are of great interest and value to the users of education statistics. It was certainly a breakthrough when we were able to obtain 1981-82 data from the survey of High School and Beyond, and I recommend that we request similar data from our respondents when we conduct longitudinal surveys in the future. Our eventual goal should be to obtain these data at intervals of about four to six years.

The survey of preprimary enrollment should be continued at intervals of two or three years. There is a good deal of interest in early childhood education, and this may intensify as the number of young children increases. This would appear to be the appropriate vehicle for measuring the participation of 3-, 4-, and 5-year-olds in nursery school programs. As indicated above, a problem arises when you include large numbers of these children in private elementary school enrollment along with small numbers of them in public elementary school enrollment and then compare total enrollment in public and in private schools.

Special education for the handicapped and for the gifted has been the focus of a number of studies of this office through the years. After a long period of inactivity in this area, we published a contract report, The School-Age Handicapped, earlier this year. The report used program data from the Office of Special Education and Rehabilitative Services, U.S. Department of Education, to provide national totals on the "number of children 3 to 21 served annually in educational programs for the handicapped." I would like to see the Center do a survey, possibly a

large sample survey, in which we obtain State and national totals on the number of handicapped children and gifted children enrolled in special education programs. The handicapped children should be reported by type of handicap, and it would be interesting to know how many are being educated in regular public schools and how many in special schools for the handicapped.

A promising area for research is the organizational structure of public and private elementary and secondary schools. In the recent past we have seen the rise of the public middle school, a category consisting of schools with grades 6 through 8, 5 through 8, or some similar combination of grades. At the same time there has been some reduction in the number of public junior high schools, i.e., schools with grades 7 and 8 or 7 through 9. A study of these trends, the number of children affected, and the influence of different organizational patterns on the learning process would be of considerable interest.

Data from this office on the educational background, teaching assignment, years of teaching experience, and personal characteristics of public school teachers would be very useful. This kind of information is reported at five-year intervals by the National Education Association in their Status of the American Public School Teacher. Our survey, based upon data from a nationwide sample of public school teachers, should not be designed to supplant the NEA study, but it should provide more frequent data from a substantially larger sample.

Almost everyone is interested in the dropout problem, but no one seems to produce definitive data on the number and characteristics of dropouts and why they leave school before high school graduation. The logical place for a survey of this kind is the Longitudinal Studies Branch of the Center. This group has already followed up the high school sophomores of 1980 to see how many of them graduated in 1982. This survey should be regarded as a trial run, because it excluded those persons who dropped out of school before the spring of their sophomore year. When work begins on the next cohort of students, I recommend that the study measure dropouts from the beginning of the ninth grade. Currently, about 99 percent of the young people enter the ninth grade, but then the rate of withdrawal from school accelerates sharply, especially between grades 10 and 11 and grades 11 and 12. Most of the high school seniors do stay in school until graduation.

Another area that we talk about a great deal and where we have very little hard data is the quality of education. People want to be able to compare the education provided in their school system or their State with the education in other school systems or other States or with national norms. These comparisons are very difficult to make unless one is willing to settle for quantitative surrogates for quality, such as expenditure per pupil, average salary of classroom teachers, and pupil-teacher ratios. One solution to this problem is to use the national norms provided by the National Assessment of Educational Progress (NAEP) and to encourage the States and even some local school systems to administer the NAEP tests to their students. If enough States and communities participated in the program, we might eventually reach the point where we could begin to have some notion of the differences in the quality of education being provided in different areas. Obviously, the measures derived in this way would not be the final word, but they would be a beginning.

I don't want to leave the field of elementary and secondary education without saying a good word for our statistical projections program. This program is a legacy from our good friend and long-time branch chief, Dr. Kenneth A. Simon. The projections have appeared on a regularly recurring basis since 1964, and our statistical information staff uses them constantly. Especially in the past few years, when the flow of reliable information on elementary and secondary schools has slowed to a trickle, we have found the projections to be invaluable. We definitely should continue to produce annual projections at least 10 years into the future of school enrollment, teachers, teacher supply and demand, high school graduates, and expenditures for education at the national level. I should also like to see the program expanded to include State projections of enrollment, teachers, and graduates for the school year just beginning and for 5 and 10 years ahead.

Up to this point I have talked mainly about the content of our elementary and secondary program. This is appropriate because my work makes me data oriented rather than process oriented. But, in conclusion, I should like to say a little bit about methodology and sources of data.

In the mid-1970's there was a great deal of talk in the Center about a new survey, the Common Core of Data. This survey was designed to provide vast amounts of information from the local school systems around the country. About this time I had a foreign visitor, from India as I recall, to whom I was describing the Center and its data collection program. After I had done my best to describe the Common Core of Data, he responded with indisputable logic: "Why in the world would anybody go to 16,000 sources to get the same information he could get from 51 sources?" I thought he was right 10 years ago, and I still think so today. Nobody has ever been able to explain satisfactorily to me why we collect such a great mass of data on local school systems that are never published and that practically nobody ever sees. Instead we should be concentrating our limited resources on getting good trend data from each State department of education and on analyzing and publishing these State figures expeditiously. The data we publish on local school systems should be limited to the information in our directory of school systems plus a couple of tables in the Digest of Education Statistics and/or The Condition of Education. And we certainly should not be collecting large amounts of information that we don't plan to use.

Our major source of statistics on elementary and secondary schools should be the State departments of education. For information that is not available in the State departments and that we still feel we urgently need, we usually should resort to sample surveys. Useful information can be obtained, for example, from the population surveys of the Bureau of the Census or from a nationwide sample of teachers. The survey of private elementary and secondary schools may very well be an exception. If we are going to do this survey at all, it should be done well. The data should be consistent from one year to the next and should be comparable with the figures we obtain for public schools. In addition, we need to be able to provide the private school data by State, by level, and by type of affiliation. In order to meet all of these criteria, a survey of the universe is probably required, even if it means that we have to conduct the survey less frequently.

If you have read between the lines of this paper, you have probably gotten my message. In case you haven't, the message is this: I found a home here, and I believe in the Center and its mission. On the other hand, even a good thing can be improved, and that includes the elementary and secondary statistics program of NCES. One of our major problems is not that we have done too little, but that we have tried, with limited resources, to do too much. We have spread ourselves so thin that the really important surveys, like Statistics of State School Systems and Fall Statistics of Public Elementary and Secondary Day Schools have fallen through the cracks. It is time to pick up the pieces and put them back together again.